

PATENT COOPERATION TREATY
PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference OPP-W031014	FOR FURTHER ACTION		see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/KR2003/002123	International filing date (day/month/year) 14 OCTOBER 2003 (14.10.2003)	(Earliest) Priority Date (day/month/year) 14 OCTOBER 2002 (14.10.2002)	
Applicant WANG, Young Sung			

This International search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 4 sheets.

It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, see Box No. I.

2. Certain claims were found unsearchable (See Box No. II)

3. Unity of invention is lacking (See Box No. III)

4. With regard to the title,

the text is approved as submitted by the applicant.

the text has been established by this Authority to read as follows:

5. With regard to the abstract,

the text is approved as submitted by the applicant.

the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the drawings,

a. the figure of the drawings to be published with the abstract is Figure No. 1

as suggested by the applicant.

because the applicant failed to suggest a figure.

because this figure better characterizes the invention.

b. none of the figure is to be published with the abstract.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/KR2003/002123

CLASSIFICATION OF SUBJECT MATTER

IPC7 A01G 27/04

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7 A01G 9/00, A01G 9/02, A01G 27/00, A01G 27/04, A01G 31/00

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
Korean Utility models and applications for Utility models since 1975
Japanese Utility models and applications for Utility models since 1975Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
eKIPASS

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JP 10-164993 A (KANEKO HIROAKI) 23 June 1998 see paragraphs 33 - 35; figures 4, 5	I - 11
A	JP 3026081 U (MIYAMOTO DAISUKE) 10 April 1996 see page 11, line 22 - page 12, line 11; figure 4	I - 11
A	JP 3-34754 U (HACHIRAKUN Ltd.) 04 April 1991 see the whole document	I - 11
A	US 6,314,678 B1 (TATSUO AKAI) 13 November 2001 see column 8, line 18 - column 9, line 18; figures 9 - 12	I - 11
A	US 4,324,070 A (CAROLYN L. SWISHER) 13 April 1982 see the whole document	I - 11

 Further documents are listed in the continuation of Box C. See patent family annex.

* Special categories of cited documents:
 "A" document defining the general state of the art which is not considered to be of particular relevance
 "E" earlier application or patent but published on or after the international filing date
 "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified)
 "O" document referring to an oral disclosure, use, exhibition or other means
 "P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
 "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
 "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
 "&" document member of the same patent family

Date of the actual completion of the international search
29 JANUARY 2004 (29.01.2004)Date of mailing of the international search report
29 JANUARY 2004 (29.01.2004)Name and mailing address of the ISA/KR
Korean Intellectual Property Office
920 Dunsan-dong, Seo-gu, Daejeon 302-701,
Republic of Korea
Facsimile No. 82-42-472-7140Authorized officer
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INTERNATIONAL SEARCH REPORT

International application No.

PCT/KR2003/002123

(continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	KR 1980-1968 YI(GWON OH SEOK) 12 December 1980 see claim 1; figure 2	1 - 11

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/KR2003/002123

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
JP 10-164993 A	23.06.1998	NONE	
JP 3026081 U	10.04.1996	NONE	
JP 3-34754 U	04.04.1991	NONE	
US 6,314,678 B1	13.11.2001	NO 991504 A0 EP 943234 A1 WO 9814050 A1 AU 4319897 A1 JP 10150871 A2 CN 1232364 A NO 991504 A EP 943234 A4 JP 3044006 B2 AU 719594 B2 TW 381000 B NZ 334952 A DE 69717665 T2 CN 1105490 B CA 2267592 C AT 228755 E EP 943234 B1 DE 69717665 C0	26.03.1999 22.09.1999 09.04.1998 24.04.1998 09.06.1998 20.10.1998 31.05.1999 24.01.2001 22.05.2000 11.05.2000 01.02.2000 25.05.2001 21.08.2003 16.04.2003 03.12.2002 15.12.2002 04.12.2002 16.01.2003
US 4,324,070 A	13.04.1982	NONE	
KR 1980-1968 Y1	12.12.1980	NONE	